

Lightweight Flexible Coupling Fig. 7000



The Fig. 7000 Lightweight Flexible Coupling is designed for applications where system flexibility is desired.

The Fig. 7000 Coupling is approximately 30% lighter in weight than the Fig. 7001 Coupling, and allows for working pressure ratings up to 600 psi (41.4 bar).

The Figure 7000 Lightweight Flexible Coupling is intended for use in several applications. See gasket Grade Index for gasket recommendations.

See technical data section for design factors.

For Listings/Approval Details and Limitations, visit our website at www.asc-es.com or contact an ASC Engineered Solutions™ Sales Representative.

Material Specifications

Bolts

SAE J429, Grade 5, Zinc Electroplated
ISO 898-1, Class 8.8, Zinc Electroplated
followed by a Yellow Chromate Dip

Heavy Hex Nuts

ASTM A563, Grade A, Zinc Electroplated
ISO 898-2, Class 8.8, Zinc Electroplated
followed by a Yellow Chromate Dip

Hardware Kits

304 Stainless Steel (available in sizes up to ¾")

Kit includes:

- (2) Bolts per ASTM A193, Grade B8 and
- (2) Heavy Hex Nuts per ASTM A194, Grade 8.

EcoGuard® (available in sizes up to ¾")

Kit includes:

- Bolts per SAE J429, Grade 5, with EcoGuard corrosion-resistant zinc flake coating and
- (2) Heavy Hex Nuts per ASTM A563, Grade A, EcoGuard corrosion-resistant zinc flake coating.

Material Specifications (continued)

Stainless Steel Bolts & Nuts

304SS bolts and nuts are available as a standard option. (316SS are available for special order).

Housing

Ductile Iron conforming to ASTM A536, Grade 65-45-12

Coatings

- Rust inhibiting paint
- Color: Orange (standard)
- Hot Dipped Zinc Galvanized (optional)

Gasket Materials

Properties as designated in accordance with ASTM D2000

Grade "EP" EPDM (Green and Red color code)
-40°F to 250°F (Service Temperature Range)
(-40°C to 121°C)

Recommended for water service, diluted acids, alkalis solutions, oil-free air and many other chemical services.

NOT FOR USE IN PETROLEUM APPLICATIONS.

For hot water applications the use of Gruvlok Extreme Temperature Lubricant is recommended. NSF-61 Certified for cold and hot water applications up through 12".

Grade "T" Nitrile (Orange color code)

20°F to 180°F (Service Temperature Range)
(-29°C to 82°C)

Recommended for petroleum applications. Air with oil vapors and vegetable and mineral oils.

NOT FOR USE IN HOT WATER OR HOT AIR

Grade "O" Fluoro-Elastomer (Blue color code)

Size Range: 1" - 8" (C style only)

-20°F to 300°F (Service Temperature Range)
(-29°C to 149°C)

Recommended for high temperature resistance to oxidizing acids, petroleum oils, hydraulic fluids, halogenated hydrocarbons and lubricants.

Grade "L" Silicone (Red color code)

Size Range: 1" - 8" (C style only)

-40°F to 350°F (Service Temperature Range)
(-40°C to 177°C)

Recommended for dry, hot air and some high temperature chemical services.

Gasket Type

Standard C Style (1" - 8")

Flush Gap (1" - 8")

Lubrication

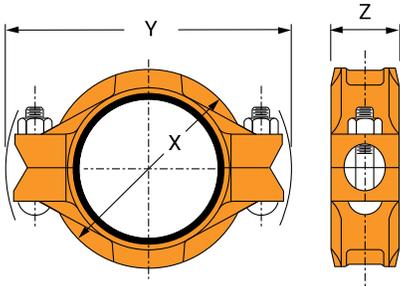
Standard Gruvlok

Gruvlok Xtreme (Do Not use with Grade "L")



PROJECT INFORMATION	APPROVAL STAMP
Project:	Approved
Address:	Approved as noted
Contractor:	Not approved
Engineer:	Remarks:
Submittal Date:	
Notes 1:	
Notes 2:	

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Nominal Size	O.D.	Max. Working Pressure on Sched. 40	Max. Working Pressure on Sched. 10	Max. End Load	Nominal Range of Pipe End Separation	Deflection from ζ		Coupling Dimensions			Coupling Bolts		Approx. Wt. Ea.
						Angular	Linear	X	Y	Z	Qty.	Size	
In./DN(mm)	In./mm	PSI/bar	PSI/bar	Lbs./kN	In./mm	Degrees	In./ft-mm/m	In./mm	In./mm	In./mm		In./mm	Lbs./kg
1 25	1.315 33.4	600 41.4	600 41.3	815 3.62	0-0.13 0-3.18	2.73	0.57 47.6	2 $\frac{3}{8}$ 60	4 $\frac{1}{4}$ 108	1 $\frac{3}{4}$ 44	2	$\frac{3}{8}$ x 2 $\frac{1}{4}$ M10 x 57	1.3 0.6
1 $\frac{1}{4}$ 32	1.660 42.2	600 41.4	600 41.3	1,299 5.78	0-0.13 0-3.18	2.17	0.45 37.6	2 $\frac{3}{4}$ 70	4 $\frac{3}{8}$ 111	1 $\frac{3}{4}$ 44	2	$\frac{3}{8}$ x 2 $\frac{1}{4}$ M10 x 57	1.4 0.6
1 $\frac{1}{2}$ 40	1.900 48.3	600 41.4	600 41.3	1,701 7.57	0-0.13 0-3.18	1.90	0.40 33.0	3 76	4 $\frac{5}{8}$ 117	1 $\frac{3}{4}$ 44	2	$\frac{3}{8}$ x 2 $\frac{1}{4}$ M10 x 57	1.5 0.7
2 50	2.375 60.3	600 41.4	600 41.3	2,658 11.82	0-0.13 0-3.18	1.50	0.31 26.2	3 $\frac{1}{2}$ 89	5 $\frac{1}{2}$ 140	1 $\frac{3}{4}$ 44	2	$\frac{3}{8}$ x 2 $\frac{1}{4}$ M10 x 57	1.7 0.8
2 $\frac{1}{2}$ 65	2.875 73.0	600 41.4	600 41.3	3,895 17.33	0-0.13 0-3.18	1.23	0.26 21.8	4 102	5 $\frac{3}{4}$ 146	1 $\frac{3}{4}$ 44	2	$\frac{3}{8}$ x 2 $\frac{1}{4}$ M10 x 57	1.9 0.9
3 80	3.500 88.9	600 41.4	600 41.3	5,773 25.68	0-0.13 0-3.18	1.03	0.21 17.8	4 $\frac{5}{8}$ 117	6 $\frac{3}{4}$ 171	1 $\frac{3}{4}$ 44	2	$\frac{1}{2}$ x 2 $\frac{3}{4}$ M12 x 70	2.9 1.3
3 $\frac{1}{2}$ 90	4.000 101.6	600 41.4	600 41.3	7,540 33.54	0-0.13 0-3.18	0.90	0.19 15.6	5 $\frac{1}{8}$ 130	7 $\frac{5}{8}$ 194	1 $\frac{3}{4}$ 44	2	$\frac{1}{2}$ x 3 M12 x 76	3.1 1.4
4 100	4.500 114.3	600 41.4	600 41.3	9,543 42.45	0-0.25 0-6.35	1.60	0.33 27.7	5 $\frac{7}{8}$ 149	8 $\frac{1}{8}$ 206	2 51	2	$\frac{1}{2}$ x 3 M12 x 76	4.6 2.1

Notes:

Maximum end load is defined as the max allowable force from the combination of internal pressure thrust at the pipe joint and external loads based on the use of standard ASME B36.10 pipe that is grooved in accordance with ASC's groove specification.

Pressure ratings and end loads may differ for other pipe materials and/or wall thicknesses.

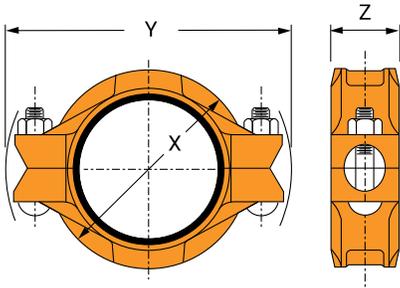
See Gruvlok Coupling Working Pressure Ratings document published in the resources section of the website for pressure ratings on alternate pipe materials.



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Nominal Size	O.D.	Max. Working Pressure on Sched. 40	Max. Working Pressure on Sched. 10	Max. End Load	Nominal Range of Pipe End Separation	Deflection from \mathcal{C}		Coupling Dimensions			Coupling Bolts		Approx. Wt. Ea.
						Angular	Linear	X	Y	Z	Qty.	Size	
In./DN(mm)	In./mm	PSI/bar	PSI/bar	Lbs./kN	In./mm	Degrees	In./ft-mm/m	In./mm	In./mm	In./mm		In./mm	Lbs./kg
5	5.563	500	500	12,153	0-0.25	1.29	0.27	7	9 ⁵ / ₈	2	2	5/8 x 3 ¹ / ₂	6.1
125	141.3	34.5	34.5	54.06	0-6.35		22.4	178	244	51		M16 x 85	2.8
6	6.625	500	400	17,236	0-0.25	1.09	0.23	8	11	2	2	5/8 x 3 ¹ / ₂	8.1
150	168.3	34.5	27.6	76.67	0-6.35		18.8	203	279	51		M16 x 85	3.7
8	8.625	500	350	29,213	0-0.25	0.82	0.17	10 ¹ / ₂	12 ¹³ / ₁₆	2 ¹ / ₂	2	3/4 x 4 ¹ / ₂	14.2
200	219.1	34.5	24.1	129.95	0-6.35		14.5	264	337	60		M20 x 110	6.4

Notes:
 Maximum end load is defined as the max allowable force from the combination of internal pressure thrust at the pipe joint and external loads based on the use of standard ASME B36.10 pipe that is grooved in accordance with ASC's groove specification.
 Pressure ratings and end loads may differ for other pipe materials and/or wall thicknesses.
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Fig. 7000 Lightweight Flexible Coupling

1 Check & Lubricate Gasket

Check gasket to be sure it is compatible for the intended service. Apply a thin coating of Gruvlok lubricant to the exterior surface and sealing lips of the gasket. Be careful that foreign particles do not adhere to lubricated surfaces.

2 Gasket Installation

Slip the gasket over the pipe end, making sure the gasket lip does not overhang the pipe end.

3 Alignment

After aligning the two pipe ends together, pull the gasket into position, centering it between the grooves on each pipe. Gasket should not extend into the groove on either pipe.

4 Housings

With one nut unthreaded to the end of the bolt, unthread the other nut completely and swing the coupling housing halves over the gasket, making sure the housing keys engage the grooves. Insert the bolt and turn the nuts finger tight.

5 Tighten Nuts

Securely tighten nuts alternately and equally, keeping the gaps at the bolt pads evenly spaced until there is metal-to-metal contact at the bolt pads. The housing bolt pads must make metal-to-metal contact.

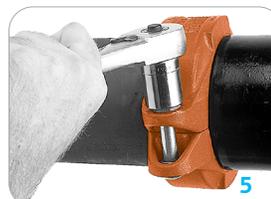
Maximum Bolt Torque

Bolt Size (In.)	Wrench Size (In.)	Ft-Lbs
3/8	11/16	50
1/2	7/8	120
5/8	1 1/16	235
3/4	1 1/2	425

CAUTION: Uneven tightening may cause the gasket to pinch.

WARNING:

Proper tightening of coupling bolts is required to obtain specified performance. Over tightening the bolts may result in joint damage. Pipe joint separation may result in significant property damage and serious injury.



6 Assembly is Complete

Visually inspect the pipe joint to assure the coupling keys are fully engaged in the pipe grooves and the bolt pads are in firm even metal-to-metal contact on both sides of the coupling.



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